IN THE CLAIMS

Please amend the claims as follows:

Claim 1 (Previously Presented): An apparatus for performing a semiconductor process on a target substrate, comprising:

a process container configured to accommodate the target substrate;

a gas supply system configured to supply a process gas into the process container;

a worktable disposed in the process container, the worktable having an upper surface on which the target substrate is placed, and a lower surface which is exposed inside the process container; and

a lifting mechanism configured to assist transfer of the target substrate with respect to the upper surface of the worktable,

wherein the lifting mechanism comprises

a lifter pin configured to support the target substrate,

a driving unit configured to move the lifter pin up and down, and

a guide hole configured to guide the lifter pin being moved up and down, the guide hole comprising a main hole portion which extends from the upper surface to the lower surface through the worktable, and an extended hole portion which extends into an extension sleeve which projects downward from the lower surface of the worktable to correspond to the main hole portion,

wherein a groove portion is formed in an outer surface of the lifter pin and extends in a longitudinal direction of the lifter pin such that, when the lifter pin is set by the driving unit in a predetermined state where the lifter pin protrudes above the upper surface of the worktable, an upper side of the groove portion is exposed above the upper surface of the worktable while a lower side of the groove portion is present below the upper surface of the

worktable.

Claim 2 (Original): The apparatus according to claim 1, wherein a length of the extended hole portion of the guide hole is larger than a half length of the main hole portion of the guide hole.

Claim 3 (Original): The apparatus according to claim 1, wherein an upper end of an auxiliary pipe is attached to the lower surface of the worktable, and the auxiliary pipe as a whole forms the extension sleeve, such that the extended hole portion is formed in the auxiliary pipe.

Claim 4 (Original): The apparatus according to claim 1, wherein an auxiliary pipe is inserted into a through hole which vertically extends through the worktable, and a portion of the auxiliary pipe, which projects downward from the lower surface of the worktable, forms the extension sleeve, such that the main hole portion and the extended hole portion are formed in the auxiliary pipe.

Claim 5 (Original): The apparatus according to claim 4, further comprising a flange formed at an upper end portion of the auxiliary pipe to engage with the worktable, and a fixing member configured to abut against the lower surface of the worktable to engage with an outer surface of the auxiliary pipe, wherein the auxiliary pipe is fixed to the worktable by cooperation of the flange and the fixing member.

Claim 6 (Original): The apparatus according to claim 1, wherein the driving unit moves the lifter pin up and down between first and second states, and the lifter pin protrudes

above the upper surface of the worktable in order to assist transfer of the target substrate in the first state, and

retracts below the upper surface of the worktable in order to perform the semiconductor process in the second state, and in the second state, a lower contact point at which the lifter pin comes in contact with an inner surface of the guide hole is positioned above a lower end portion of the extension sleeve.

Claim 7 (Original): The apparatus according to claim 6, wherein the lifter pin has an upper shaft portion and a lower shaft portion having a diameter smaller than that of the upper shaft portion, and a lower end portion of the upper shaft portion forms the lower contact point.

Claim 8 (Currently Amended): The apparatus according to claim [[1]] 7, wherein the lower shaft portion has a tapered shape which gradually decreases a diameter thereof downward.

Claim 9 (Original): The apparatus according to claim 1, wherein an inner surface of the extended hole portion of the guide hole gradually increases a diameter thereof downward.

Claim 10 (Original): The apparatus according to claim 1, wherein the driving unit moves the lifter pin up and down between first and second states, and the lifter pin protrudes above the upper surface of the worktable in order to assist transfer of the target substrate in the first state, and retracts below the upper surface of the worktable in order to perform the semiconductor process in the second state, and

an annular recess is formed in an outer surface of the lifter pin, and positioned above a lower end portion of the extension sleeve in the second state of the lifter pin.

Claim 11 (Previously Presented): The apparatus according to claim 1, wherein the driving unit moves the lifter pin up and down between first and second states, and the lifter pin protrudes above the upper surface of the worktable in order to assist transfer of the target substrate in the first state, and retracts below the upper surface of the worktable in order to perform the semiconductor process in the second state, and

a lower end portion of the groove portion is positioned above a lower end portion of the extension sleeve in the second state of the lifter pin.

Claim 12 (Canceled).

Claim 13 (Original): The apparatus according to claim 1, wherein a lower end portion of the lifter pin abuts against a driving surface of the driving unit so as to be separable therefrom.

Claim 14-15 (Canceled).

Claim 16 (Previously Presented): The apparatus according to claim 1, wherein a plurality of groove portions are formed in the outer surface of the lifter pin, wherein the plurality of groove portions are provided at annular intervals about the outer surface.

Claim 17 (Previously Presented): The apparatus according to claim 1, wherein an annular recess is formed in the outer surface of the lifter pin at a position corresponding to a

lower end portion of the groove portion, and wherein the annular recess communicates with the lower end portion of the groove portion.

Claim 18 (Previously Presented): The apparatus according to claim 7, wherein the groove portion is formed on the upper shaft portion.

Claim 19 (Previously Presented): The apparatus according to claim 1, wherein the groove portion has a ratio of an opening width relative to a depth, which is set within a range of 0.5 to 2.0.

Claim 20 (Previously Presented): A method for using the apparatus according to claim 1, wherein the method comprises supplying a cleaning gas into the process container while setting the lifter pin in the predetermined state, thereby diffusing the cleaning gas into the guide hole through the upper side of the groove portion.

Claim 21 (Previously Presented): An apparatus for performing a semiconductor process on a target substrate, comprising:

a process container configured to accommodate the target substrate;

a gas supply system configured to supply a process gas into the process container;

a worktable disposed in the process container, the worktable having an upper surface on which the target substrate is placed, and a lower surface which is exposed inside the process container; and

a lifting mechanism configured to assist transfer of the target substrate with respect to the upper surface of the worktable,

wherein the lifting mechanism comprises

a lifter pin configured to support the target substrate,

a driving unit configured to move the lifter pin up and down, and

a guide hole configured to guide the lifter pin being moved up and down, the guide hole comprising a main hole portion which extends from the upper surface to the lower surface through the worktable, and an extended hole portion which extends into an extension sleeve which projects downward from the lower surface of the worktable to correspond to the main hole portion,

wherein an auxiliary pipe is inserted into a through hole which vertically extends through the worktable such that the main hole portion and the extended hole portion are formed in the auxiliary pipe, and a groove portion is formed in an inner surface of the auxiliary pipe and extends in a longitudinal direction of the auxiliary pipe such that the groove portion has an upper end portion opened at an upper end portion of the auxiliary pipe.

Claim 22 (Previously Presented): The apparatus according to claim 21, wherein the groove portion has a lower end portion positioned above a lower end portion of the auxiliary pipe.

Claim 23 (Previously Presented): The apparatus according to claim 21, wherein a plurality of groove portions are formed in the inner surface of the auxiliary pipe, and wherein the plurality of groove portions are provided at annular intervals about the inner surface.